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ABSTRACT

Research suggests that the high school dropout rate can be reduced through improved educational programming, especially in vocational education. Several studies have found that when students with similar backgrounds are compared, those who participate in vocational education are more likely to graduate. To determine why students drop out, Weber (1986) analyzed a sample of 2,000 dropouts and 3,000 graduates with similar characteristics from the High School and Beyond database. Besides supporting the positive relation between participation in vocational education and high school retention, the findings suggest that dropouts do not put much time into planning their high school programs, nor do they participate in the mainstream of vocational programs. Further research revealed that successful dropout prevention programs have in common several factors of organization, staffing, and instruction. Some educators see joint efforts between academic and vocational teachers in teaching at-risk students as productive in dropout prevention. Exemplary programs reported include that of the Pioneer Joint Vocational School in Shelby, Ohio, and the "Principles of Technology" curriculum project of the Center for Occupational Research and Development and the Agency for Instructional Technology. The National Center for Research in Vocational Education has developed a support package of materials, "BASICS," to assist schools in bridging vocational and academic skills. The joint effort approach appears to hold much promise for assisting at-risk youth. Twenty-seven references are listed. (KC)

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# VOCATIONAL EDUCATION AND THE RETENTION OF AT-RISK YOUTH

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# VOCATIONAL EDUCATION AND THE RETENTION OF AT-RISK YOUTH

Studying our nation's dropout problem is rapidly becoming a major emphasis in American education. Unfortunately, the statistics have become so familiar to educators that perhaps their shock value is lost.

How else does one explain the finding of a recent report prepared by MDC, Inc., for the Mott Foundation? In spite of the 800,000 to 1 million students who drop out of high school each year--many of whom lack the skills for employment (Weber 1986), only a small minority of the state level educational excellence commissions in the MDC report "had chosen to focus on at-risk youth or on the kinds of programs that could assist such youth" (Smith and Hester 1985, p. ii).

What about the schools with dropout rates of 40 percent and higher (Solorzano 1986)? But then, perhaps the majority of these commissions are unaware of the U.S. Bureau of the Census data that by 1995, the employment pool of young adults will go down 22 percent (Sticht and Mikulecky 1984). Today, only 3 workers support each Social Security recipient compared to 15 workers in the 1950s. Perhaps these commissions haven't heard that by the year 2000 the number will be 2 ("Brock says benefit tax can't last" 26 July 1985).

When it comes to dropout prevention, we can describe at-risk youth more easily than we can the problems that work (Mann 1986). The time for placing more emphasis on studying successful dropout prevention programs and the critical elements that define those

programs appears overdue. Such studies, particularly if they incorporate appropriate outcome evaluation components, could provide appropriate and much needed sequels to the U.S. Department of Education's What Works (1986).

## What the Research Says about Vocational Education's Impact on Dropout Prevention

There is a growing body of research that suggests that the dropout problem can be positively addressed through improved educational programming and that vocational education has a role to play in such efforts. For example, in a study by Mertens, Seitz, and Cox (1982), a significant positive relationship was found between high school graduation and vocational credits earned. This finding was corroborated by a recent analysis (Weber 1986) the HS&B (High School and Beyond) Survey (Peng 1983), as well as the results of several earlier research studies (e.g., Combs and Cooley 1968; Grasso and Shea 1979; Woods and Haney 1981; and Perlmutter 1982). In general, these studies suggest that when comparing students with comparable backgrounds, participation in vocational education is positively correlated with high school retention.

Although the available research has shown that participation in vocational education is significantly related statistically to staying in school, the observed relationships are typically not sizable enough to justify the conclusion that vocational education in and of itself significantly reduces the probability of dropping out of high school (Mertens 1986). The research does, however, clearly suggest that when vocational education and related work

experiences are coupled with other critical components, the resultant dropout prevention programs can be effective. For example, in a review of what were deemed to be effective dropout prevention programs (conducted primarily during the 70s), Lotto (1982) concluded that "vocational education and work experience are powerful components of a dropout prevention strategy, but they cannot function alone" (p. 49). Reviews involving recent as well as on-going dropout prevention programs (Hamilton 1986; Freeland 1986; Weber 1986; Urban School Districts' Task Force on Dropouts 1985; Wehlage 1983) serve to reinforce this general conclusion.

## The Kinds of Experiences Related to High School Retention

Although considerable research exists describing which students drop out and why (Batsche 1985), little information is available regarding the experiences of dropouts while in high school. In an effort to help fill this informational gap, Weber (1986) completed an analysis of selected high school experiences of the 27,000 students in the HS&B database. As a first step in that study two groups were identified from among the sample--(1) 2,000+ dropouts who left school prior to graduation and (2) 3,000+ completers - high probable dropouts who were quite similar to the dropouts in terms of their background and performance characteristics, but who completed high school. The experiences of the second of these groups were used as a comparative baseline for interpreting the experiences of the dropouts.

In general, the findings resulting from numerous comparisons between the dropouts and completers - high probable dropouts support earlier research regarding the positive relation between participation in vocational education and high school retention. At the same time, however, they suggest that dropouts do not engage in much preplanning regarding their high school programs, nor do they participate in the mainstream of the vocational program. They participate more in exploratory courses than in occupational (job-skill training) courses. Also, they are often involved, particularly early in their high school careers, in work-study experiences that do not appear to be directly related to their overall programs. Furthermore, they appear to be involved only rarely in school-sponsored activities directed toward helping them crystallize their future expectations and goals.

## Characteristics of Exemplary Programs Designed to Foster High School Retention

Although little progress has been made at the national level in combatting the dropout problem, it appears that a number of local programs are working. Weber (1986) reviewed the operational and organizational characteristics of a sample of 9 such exemplary programs nominated by their respective state departments of education. The sampled programs represent different areas of the country, different size school districts, a diversity of procedural strategies, and variant groups of students.

Several common program features identified during this study were the following:

(1) General organization

- o presented in contexts that differ from a "traditional" school environment
- o involve low teacher-pupil ratios
- o function somewhat autonomously
- o tend to be holistic and multifaceted in their approaches
- o use strategies defined by a combination of remedial basic skills, parental involvement, work experience/job placement, counseling, supportive services, and vocational (skill) training
- o focus upon students who are in the beginning stages of their high school careers

(2) Staffing

- o involve "special" staff teachers who are committed to their program's philosophy and goals
- o require staff who are able and willing to establish student-teacher relationships that tend to be more demanding than "normal"
- o involve staff who are flexible in their approach and able to "stay on top" of their students' needs

(3) Instruction

- o focus about half their efforts on addressing students' remediation needs (especially in basic skills)

- slot about a fourth of their efforts to resolving students' personal needs (e.g., improved self-concepts)
- target about a fourth of their efforts toward addressing students' work-related needs
- involve special, pervasive motivational strategies (e.g., tying school activities directly to real world and building espirit de corps among the participants)
- involve some degree of individualized teaching/learning activities.

Overall, the common features identified via the 9 reviewed programs are quite similar to the characteristics of similar programs noted in other recent studies (e.g., Freeland 1986; Urban School Districts' Task Force on Dropouts 1985; Hodgkinson 1985; and Wehlage and Rutter 1984). These replications of the indicated features help to validate their potential roles as contributors to effective dropout prevention effects.

## A Basic Skill Innovation May Help Increase Retention of At-Risk Youth

How many academic and vocational teachers have visited each other's classroom setting to observe the teaching methods used with at-risk youth and to analyze these students' curriculum needs? Gale Leimbach, superintendent of Pioneer Joint Vocational School in Shelby, Ohio, contends that before the dropout problem can be solved, attitudes of teachers need to change.

At Pioneer JVS this change is happening through the school's involvement in Program Options. Funded by the Ohio Department of Education, Program Options at Pioneer, as at several other vocational schools in the state, is being used to help bridge the gap between academic and vocational classes. Academic teachers, in collaboration with vocational teachers, teach applied academic classes in the vocational school to strengthen students' basic skills. Students receive academic credit for these courses toward graduation at their home school.

This joint effort benefits both academic and vocational teachers through shared insights. More important, students find it easier to learn and remember basic skills. This approach lets students apply basic skills in real ways. As a result, students' problem-solving ability and self-confidence are enhanced, thereby making them more valuable to employers.

Leimbach has seen dramatic results of this joint effort. A substitute teacher, for example, was amazed to encounter a previously disaffected youth she'd taught the year before at one of Pioneer's feeder schools. This youth is now so involved and productive in his vocational class that the substitute teachers wants to teach fulltime at Pioneer because of its nurturing environment.

Several successes with joint effort are described in the May 1986 issue of Vocational Education Journal. One of these reported by Selland (1986) concerns "Principles of Technology," an ambitious curriculum project undertaken by the Center for Occupational Research and Development (CORD) and the Agency for Instructional

Technology. PT is designed to help vocational education respond to rapid technological advances. As an applied science course, PT has been field-tested nationally in a variety of ways, among them through joint effort. Selland believes that the joint effort at one test site between a physics teacher and an industrial arts teacher is "ideal" and "added strength to the course" (p. 48).

The concept of joint effort between vocational and academic teachers has been advocated country-wide by the National Commission on Secondary Education. In The Unfinished Agenda: The Role of Vocational education in the High School (1984), this advisory group state that joint efforts can provide the mix of theory and application to educational experience that is increasingly necessary for reliance--to today's student and to the real world (p. 14).

The National Center for Research in Vocational Education, recognizing not only the potential of joint efforts for dropout prevention, but also the barriers to vocational and academic teacher collaboration, has developed a support package of materials to assist schools in bridging vocational and academic skills. BASICS offers research-based educational resources intended to help local school personnel implement joint efforts in the area of basic skills development and enhancement.

Admittedly, the factors that cause students to drop out are many and complex. Yet it is interesting to follow how the theme of basic skills deficiency continually reappears in the profiles of dropouts. In a study of one state's prisons, for example, over 80 percent of the inmates had not completed high school and many

of those were illiterate (Porter and Gilberg-Porter 1984). Other research has shown nationally that nearly half the people in prison are illiterate, and of these, 82 percent are learning disabled (Bell, Conard, and Suppa 1984).

The joint effort approach appears to hold much promise for assisting at-risk youth especially in light of higher standards of excellence and increased employer expectations of new hires. If joint efforts are used in conjunction with peer tutoring, flexible scheduling, vocational student organizations, and school-family-employer interactions, vocational education represents a resource in dropout prevention of even greater importance for the future.

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